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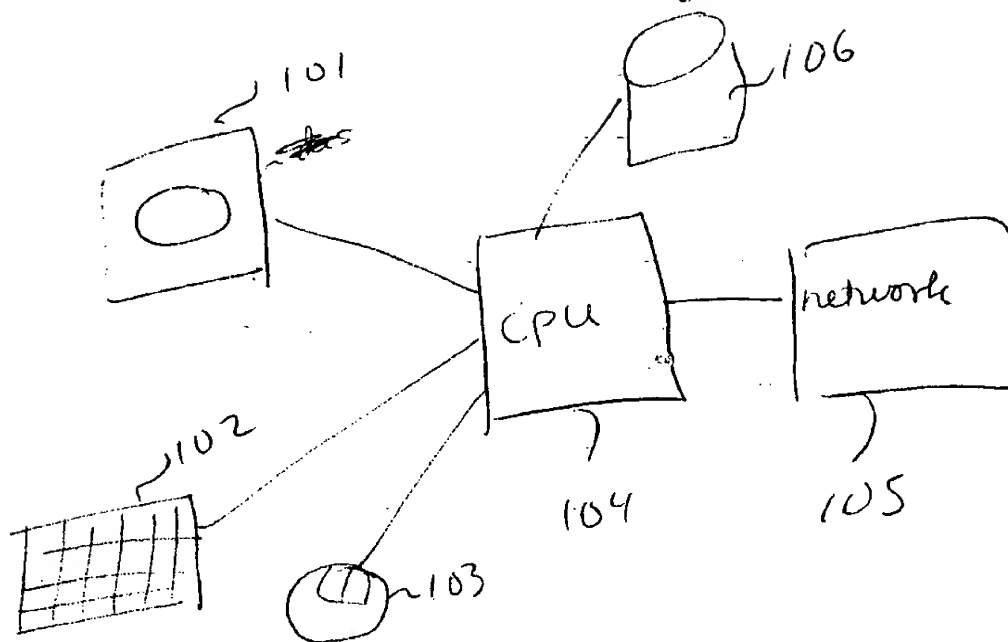
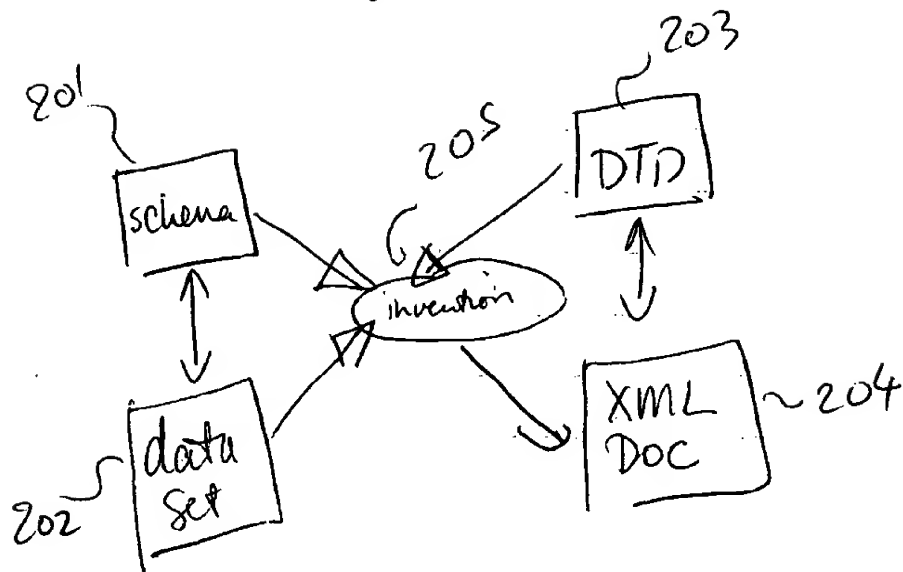


Fig. 1

Fig. 2



09466627-121799

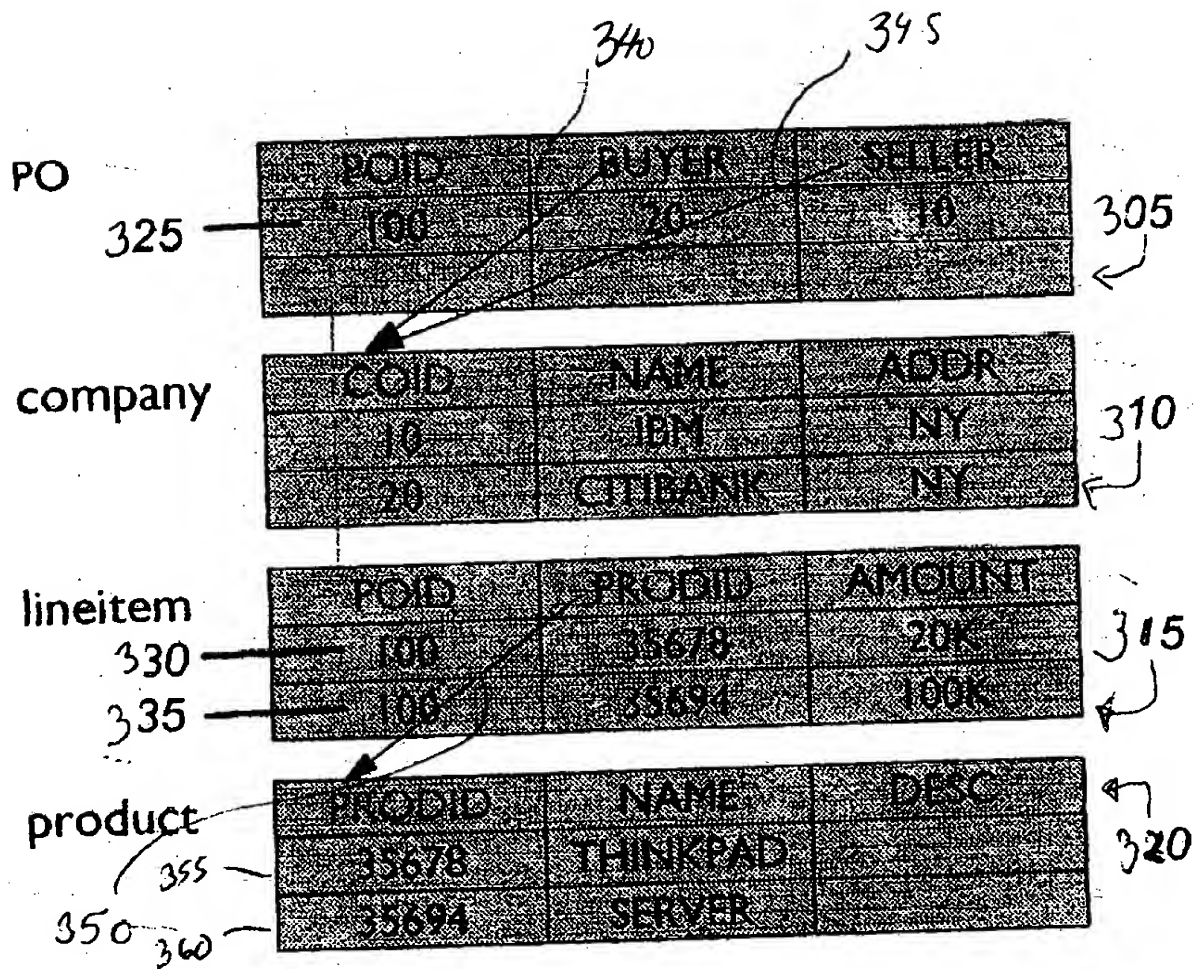


Figure 3a Example purchase order relational schema

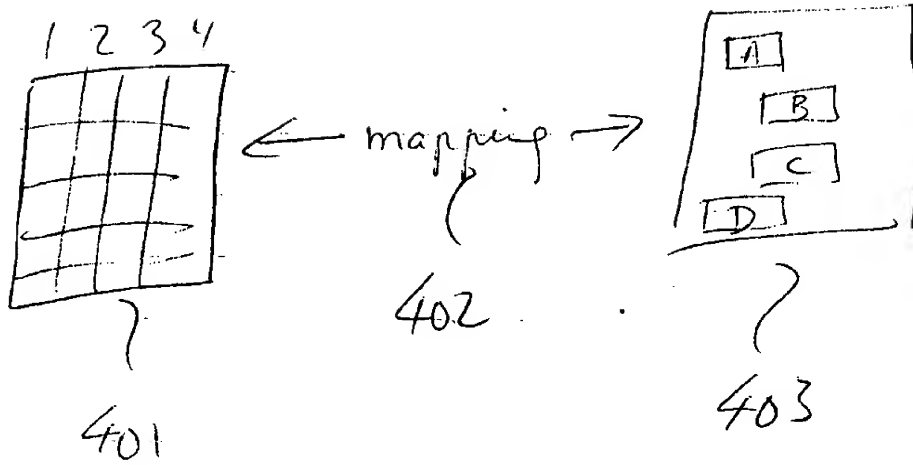
662727-2299460

301 ~<!DOCTYPE PO [  
 302 ~<!ELEMENT PO (id, buyer, seller, (lineitem)\* )>  
 323 303 ~<!ELEMENT id (#PCDATA)>  
 ~<!ATTLIST buyer  
 name CDATA #REQUIRED>  
 324 304 ~<!ELEMENT seller (address)>  
 ~<!ATTLIST seller  
 name CDATA #REQUIRED>  
 311 ~<!ELEMENT address (#PCDATA)>  
 307 ~<!ELEMENT lineitem (prodname, amount)>  
 308 ~<!ELEMENT prodname (#PCDATA)>  
 310 ~<!ELEMENT amount (#PCDATA)>  
 ]>

Figure 3b. Example DTD

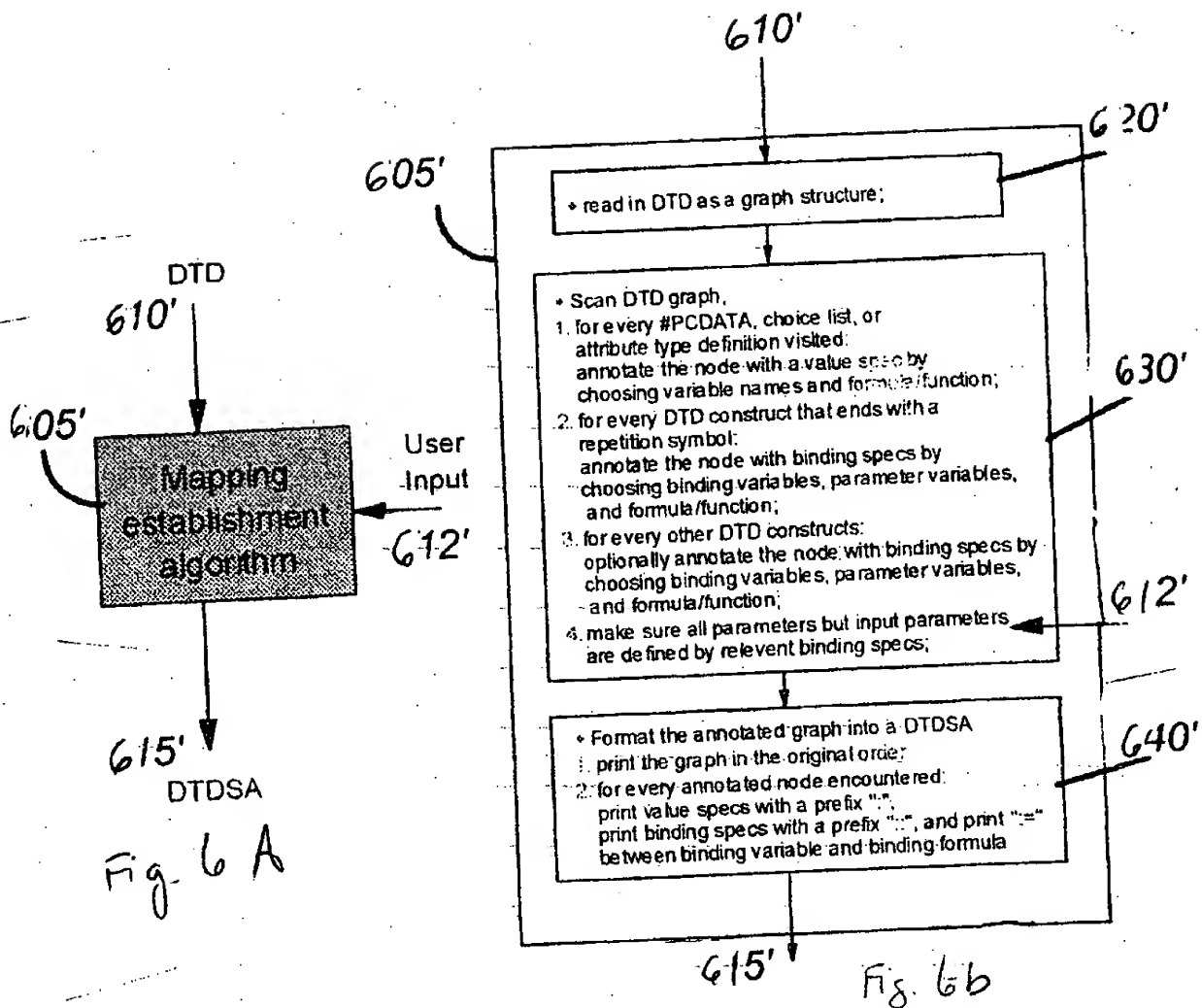
562727 22999460

Fig. 4



# REPORT

Figure 5 Example DTDSA

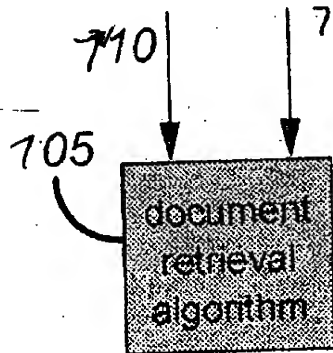


Algorithm for establishing the mapping in DTDSA format



input parameter  
pairs

(A=1;B=100) DTDSA



715  
output  
XMLi

Fig. 7a

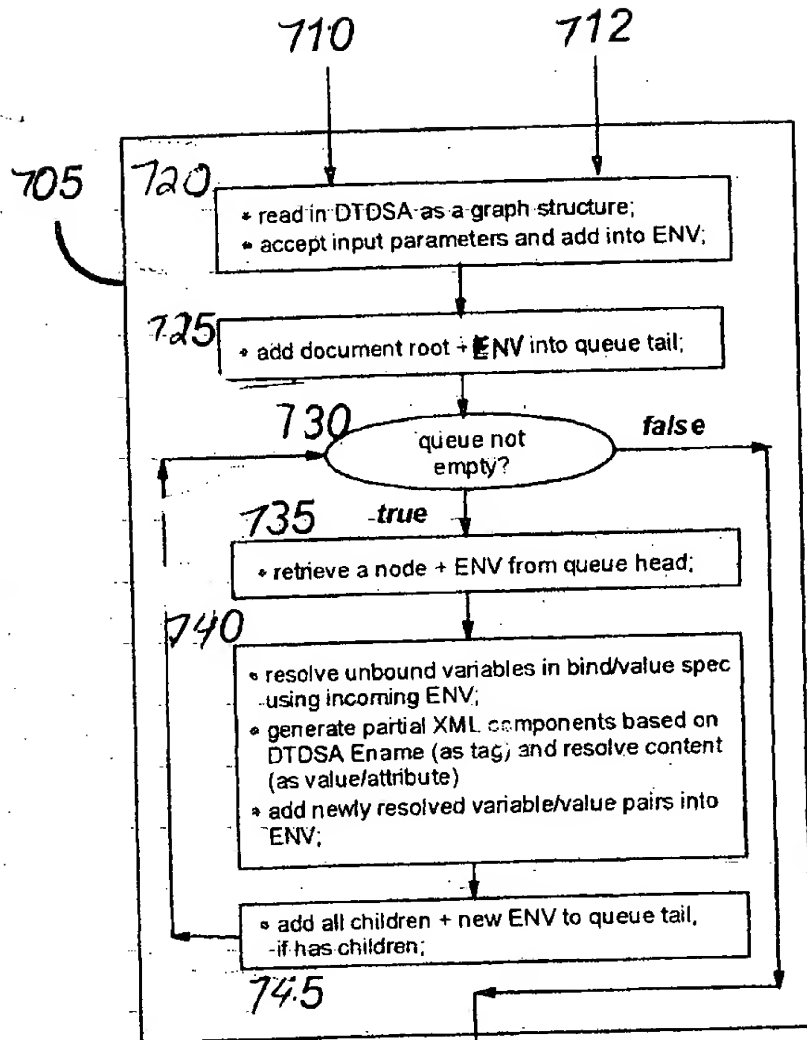


Fig 7b

Algorithm for generating XML using DTDSA

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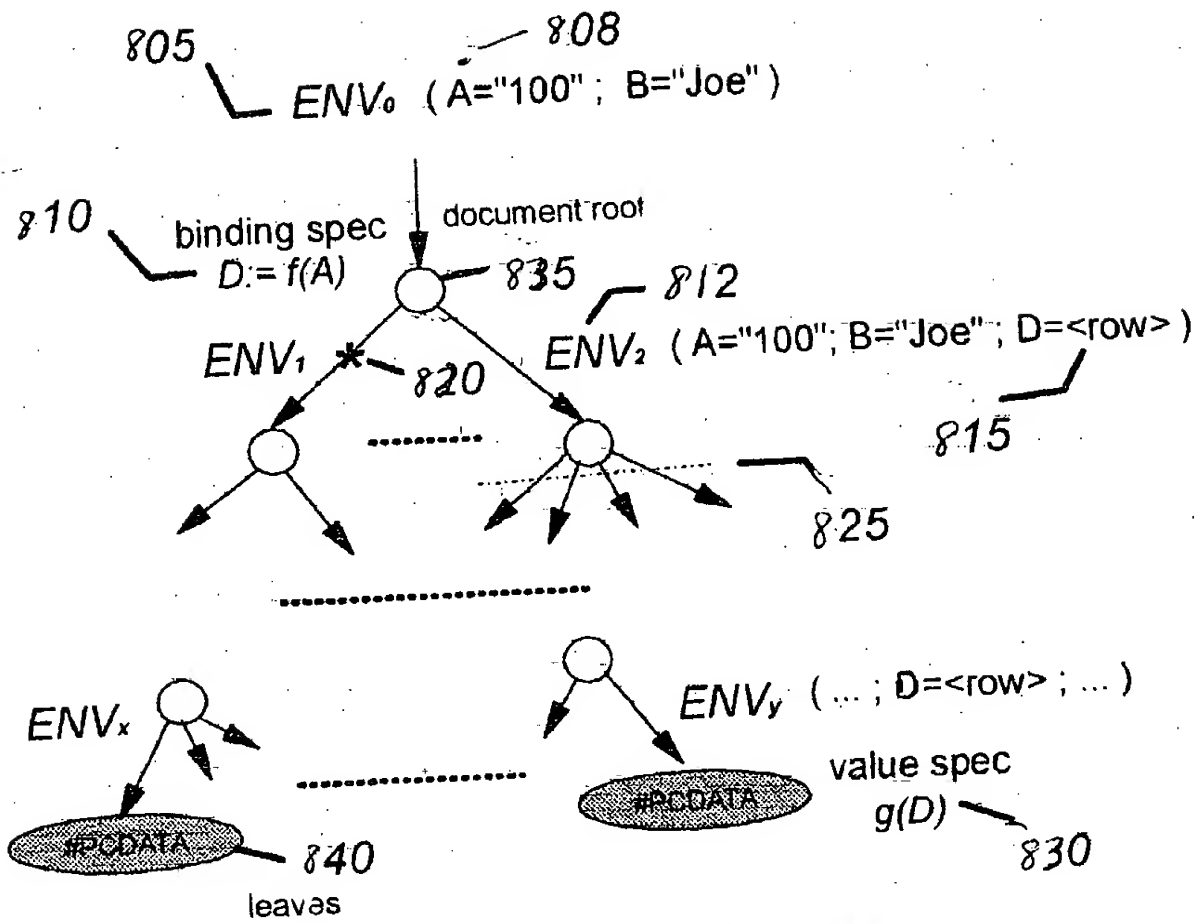


Figure 8 XML composition data flow

900  $x=100$

910  $r:=\text{row}(\text{PO}, \text{poid}, x=100)=\langle 100, 20, 10 \rangle$

905  $w:=\text{row}(\text{lineitem}, \text{poid}, 100)=$   
 $\langle \langle 100, 35768, 20K \rangle, \langle 100, 35694, 100K \rangle \rangle$

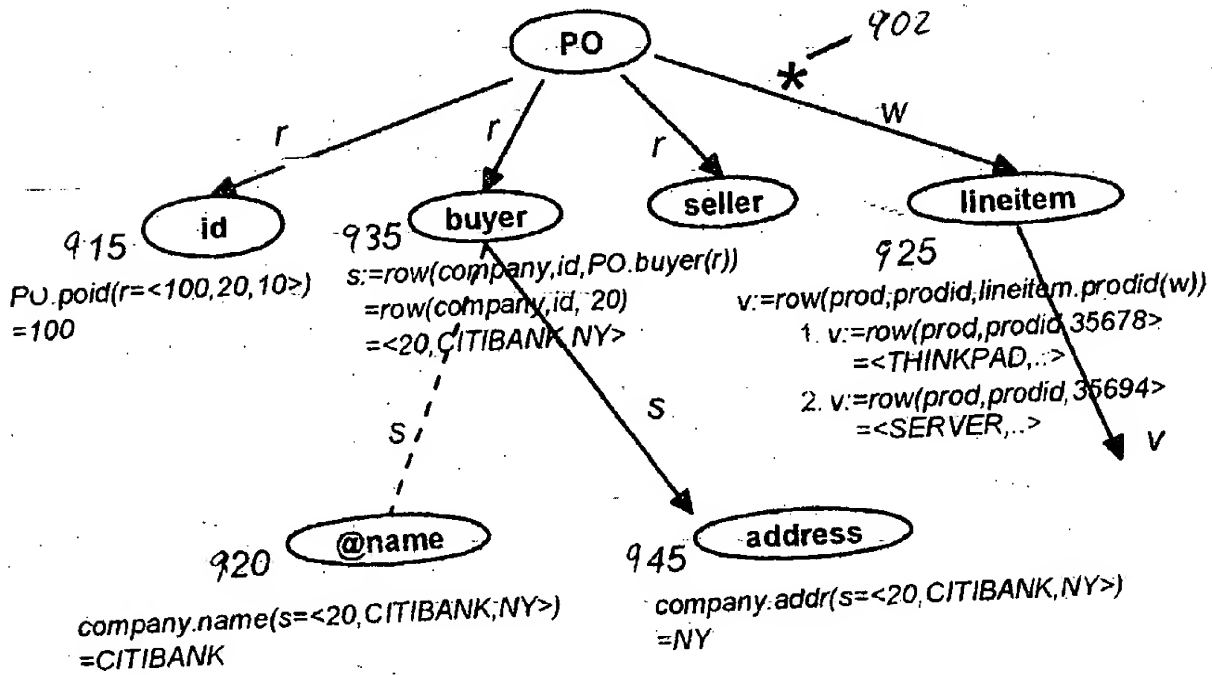


Figure 9 XML composition example with input  $x=100$

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Figure 10 Retrieved XML document (with input  $x=100$ )